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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,452	04/12/2001	Randall Allen Vogel	AD6728 US NA	3330
23906	7590	04/02/2008		
E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1122B 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER JACKSON, MONIQUE R	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 04/02/2008	DELIVERY MODE ELECTRONIC

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/833,452

Filing Date: April 12, 2001

Appellant(s): VOGEL ET AL.

Lucas K. Shay
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/16/08 appealing from the Office action mailed 10/11/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct, however to summarize, Claims 2, 4-5, 7-42, 44-53, 56, 61-65, and 73-82 have been cancelled. Claims 1, 3, 6, 43, 54, 55, 57-60, 66-72, 83 and 84 are pending and on appeal.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct, however it is noted that Claim 43 is a dependent claim not an independent claim as stated.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

2. Whether claims 1, 3, 6, 43, 54-55, 57-**60**, **66**-68, and 83-84 are obvious under 35 USC 103(a) over JP0434528 (JP'828) (wherein the final action contained a typographical error by reciting "57-**63**, **65**-68".)

3. Whether claims 1, 3, 6, 43, 54-55, 57-**60**, 66-68 and 83-84 are obvious under 35 USC 103(a) over Flieger (US5789048) (wherein the final action contained a typographic error by reciting "57-**63**".)

(7) Claims Appendix

A substantially correct copy of appealed claims 43 and 60 appears on pages 20 and 21, respectively, of the Appendix to the appellant's brief. The minor errors are as follows:

In Claim 43, on line 3, the phrase " 61, 65," should be deleted as these claims were cancelled and claim 43 was amended accordingly on 7/13/07.

In Claim 60, on line 1, the phrase "having a thickness of" should be added after "claim 3" as shown in the amendment filed on 7/13/07.

(8) Evidence Relied Upon

6,319,438	SMITH	11-2001
5,789,048	FLEIGER	8-1998
JP04345828A	JAR	12-1992

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 69-72 stand rejected under 35 U.S.C. 102(e) as being anticipated by Smith et al (USPN 6,319,438) for the reasons recited in the prior office action and restated below, wherein the Examiner maintains her position that the claimed DOI range of "at least 80" is anticipated by the teachings of Smith et al given that a range of at least 60 to a maximum of 100 would have been clearly envisaged by one skilled in the art.

Smith et al teach an extruded automotive trim and a method of making the trim wherein a multilayer sheet is coextruded to include at least one color pigmented or metallizing particle layer and a top clear coat layer wherein the multilayer sheet may further include tie layer(s) which may be clear or include color pigment and/or metallizing particles and the clear coat layer may include multiple layers; wherein as taught in an example, the layers may be formed of **ionomeric resins as instantly claimed** and wherein the sheet is laminated to a substrate which may be provided with coloring (Abstract; Figures; Col. 7-10; Col. 14, line 47-Col. 15, line 34; Col. 16, line 49-Col. 18, line 16, wherein the ionomeric resins as claimed would inherently have "matched" flow properties.) Smith et al also teach that the sheet is thermoformable, that the substrate may be various polymers, that each of the trim products has a finished surface with a distinctness of image (DOI) of at least about 60 units, where 100 is the maximum DOI reading, and a gloss of at least about 60-65 at an angle of 20°; wherein Smith et al teach that the gloss and DOI of the final trim part can be increased or improved by polishing or plating working mold surfaces since the final product may come directly from the mold apparatus (Col. 11-12; Col. 17; Col. 19, lines 45-65; Col. 8, lines 55-67.) Smith et al further teach thickness ranges that read upon the claimed film and first coextruded layer ranges (Col. 9; Col. 17, lines 22-Col. 18, line 16.)

2. Claims 1, 3, 6, 43, 54, 55, 57-60, 66-68, 83, and 84 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04345828 (JP'828) for the reasons recited in the prior office action and restated below.

JP'828 teaches a multilayer, co-extruded ionomer film comprising at least three layers including a first outer layer 1 selected from EVA, VLDPE, or mixture thereof; a core or a layer 2 of ionomer or a blend thereof with EVA, EMAA or EAA; and a second outer layer 3 selected from a group of EMAA, EAA and ionomers; wherein before stretching the film has a total thickness of about 400 to about 820 microns, with the second outer layer having a thickness of about 75 to about 155 microns (reads upon claimed about 8mils to about 60 mils and flow properties are "matched"; Abstract; Figure 2; paragraph 0023.) The core or internal layer is preferably about 200 to about 410 microns (Paragraph 0024) and the first outside layer is about 125 to about 255 microns (Paragraph 0025.) JP'828 provides an example, Structure No. 1, which includes a 90 micron sodium ionomer outer layer c, a 235 micron sodium ionomer core layer b, and a 145 micron VLDPE/EVA blend outer layer a (*also reads upon substrate of Claim 43*) for a total film thickness of 470 microns or about 18.5 mils or about 12.8 mils for the two ionomer layers only (Table 1.)

JP'828 does not teach that the film or one or more layers comprise an additive as instantly claimed however one having ordinary skill in the art at the time of the invention would have been motivated to utilize any of the claimed conventional additives, particularly a pigment to provide a desired color or property based on the desired end use of the final product. Further one having ordinary skill in the art at the time of the invention would have been motivated to determine the optimum thickness for each layer to provide the desired multilayer film for a particular end use.

3. Claims 1, 3, 6, 43, 54, 55, 57-60, 66-68, 83, and 84 are rejected under 35

U.S.C. 103(a) as being unpatentable over Flieger (USPN 5,789,048) for the reasons recited in the prior office action and restated below, wherein the Examiner notes that though Flieger teach that typically a film thickness of 70-125 microns should be adequate for 25 kg bags of polymers and elastomers, Flieger et al also teach that the thickness of the film depends upon the size and weight of the package (Col. 2, lines 61-65) and that the film may be used for other purposes such as other containers. Hence, one having ordinary skill in the art at the time of the invention would have been motivated to utilize thicker films for packages heavier than 25 kg and further to utilize routine experimentation to determine the optimum layer thickness for each layer of the film based upon the desired end use.

Flieger teaches a film made from a random ionomer copolymer comprising 55-90% by weight ethylene and 10-45% by weight of an unsaturated monocarboxylic acid having 3-8 carbon atoms, preferably acrylic acid or methacrylic acid, the copolymer being neutralized from 0-40% with a metal ion such as lithium, sodium, magnesium, or zinc (Abstract; Col. 2, lines 41-53.) Flieger teaches that the film may be formed by any procedure known in the art including flat film extrusion and blown film extrusion and typically has a thickness of 70-125 microns, wherein the film may be formed of several coextruded layers, each layer providing different properties (Col. 2, lines 58-67.) Flieger specifically teaches that the film may be formed by a black inner layer for ultraviolet light protection, a white middle layer for appearance, and a clear outer layer for printability and tackiness wherein Flieger includes an example comprising a multilayer film formed from an ionomer copolymer comprising 80% ethylene and 20% methacrylic acid neutralized 35% with sodium ions, coextruded to form a 120 micron bag

comprising a black pigmented inner layer 40 microns thick, a white pigmented middle layer 40 microns thick and a transparent outer layer 20 microns thick (Col. 3, lines 1-5; Ex. 2.) With regards to the flow properties and optical properties as instantly claimed, considering the multilayer film taught by Flieger is produced by coextrusion to form a unitary film, the Examiner takes the position that “the flow properties” of the layers are “matched” as instantly claimed. As noted above, though Flieger teach that typically a film thickness of 70-125 microns should be adequate for 25 kg bags of polymers and elastomers, Flieger et al also teach that the thickness of the film depends upon the size and weight of the package (Col. 2, lines 61-65) and that the film may be used for other purposes such as other containers. Hence, one having ordinary skill in the art at the time of the invention would have been motivated to utilize thicker films for packages heavier than 25 kg and further to utilize routine experimentation to determine the optimum layer thickness for each layer of the film based upon the desired end use.

(10) Response to Argument

Appellants' arguments filed 11/13/07 have been considered but are not persuasive. In response to the Appellants' arguments, the Examiner provides the following:

Rejection of Claims 69-72 over Smith

A. Appellants' claims were not conceived and reduced to practice before Smith with respect to the rejected claims 69-72

The Appellants' argue that the Rule 131 declarations show that the claimed invention was reduced prior to the 12/15/1998 Smith filing date. However, the Examiner notes that the Rule 131 declarations fail to support the claimed DOI as recited in Claims 69-72.

B. The base claims are anticipated by Smith

The Appellants argue that Smith fails to recite particular limitations of the claims as shown by the emphasized sections of the claims in italics on page 5, specifically that the first and second layers are co-extruded, the first co-extruded layer is clear, and that when co-extruded, flow to the full width of the die. However, the Examiner respectfully disagrees and notes that Smith clearly teaches that the multilayer film may be formed by coextrusion and hence, the layers would flow to the full width of the die. Further, though Smith clearly teaches coextrusion, the Examiner notes that the claim limitations with respect to "co-extruded" are essentially product-by-process limitations and the term "co-extruded" by itself, does not provide any additional material or structural properties to the claimed product over a film produced by a different method, such as extrusion coating, wherein the interface between the layers would also be intermingled depending upon the temperature at which the process is conducted.

C. Smith does "at once envisage" claims 69-72

It is first noted that the Appellants appear to be arguing specific embodiments of Smith as opposed to the teachings of the document as a whole. Though Smith includes examples 11f-11i formed by post-extrusion lamination, Smith specifically teaches coextrusion and hence the teachings of Smith with respect to the layer structures exemplified in 11f-11i would also encompass the same structures produced by coextrusion given the very limiting number of production methods taught by Smith. As discussed in the prior office action, Smith specifically teaches multilayer structures that read upon the claimed invention.

In Section C, Appellants first argue that Smith's teaching of "a distinctness of image (DOI) of at least about 60 units, where 100 is the maximum DOI reading" does not anticipate the claimed range of at least 80, reciting MPEP 2131.03 which refers to claims directed to a narrow

range, a reference teaching a broad range, and evidence of unexpected results within the claimed narrow range. However, the Examiner notes that the instant claims are not directed to a “narrow” range and in fact, the claimed range is half of the range disclosed by Smith, with the endpoint value of 80 exactly in the middle of the Smith range. The Appellants have also not provided any showing of unexpected results for a DOI of at least 80, and in fact, recite in the specification at page 11, that a "Class A" surface **typically** has a finish with a DOI value of at least 60, preferably 80 or higher, but do not recite any “unexpected” results with regards to the higher preferred DOI. The Examiner further notes that of the 18 or so films produced in the examples in the specification, DOI values were not reported for any of them. Hence, the Appellants’ arguments are not persuasive and the Examiner is now questioning whether the specification provides sufficient guidance to one skilled in the art as to how to produce the claimed films such that they have the claimed DOI.

Next, the Appellants argue that Claims 70-72 calls for the surface layer to be a clear layer while Smith teaches that the “only additive that may be present in the **clear coat** layer 79 is pigment” (emphasis added). The Appellants argue that contrary to the teachings of Smith, the first co-extruded polymer layer is required to “not only be clear (**no pigment**), but also consist essentially of an ionomer and a first *additive*, which is one or more UV stabilizer, UV absorber... mineral filler,...**pigment**, dye, flake or mixtures thereof” (emphasis added in bold.) Therefore, the Appellants argue that since the Smith layer contains a pigment, but no other additive, it cannot anticipate claims 70-72, however, given that the alternative list of first additives includes “pigment”, the Appellants' arguments are unclear, particularly with respect to the “no pigment”

phrase in parenthesis. The Examiner notes that the claim clearly recites that the additive is “one or more” of those listed with pigment being one of those listed.

Thirdly, the Appellants argue that Smith film 11(c) does not disclose that the two ionomers in the first and second layers have flow properties that are “matched” to allow them to flow to the full width of the die when extruded. However, as recited above, the Appellants are arguing a specific example and not the full teachings of Smith. Further, the Examiner notes that Smith specifically teach that the ionomer film, which is formed from the same ionomeric polymers as instantly claimed, may be being produced by coextrusion and hence inherently meets this limitation, particularly since the “matched” limitation is only defined with respect to “when” the layers are coextruded .

With respect to Appellants’ fourth argument over Smith in that Smith’s disclose of “at least about 60 units, where 100 is the maximum DOI reading” does not read upon the claimed at least 80, the Examiner respectfully disagrees and maintains her position that one skilled in the art at the time of the invention would clearly envisage a DOI range of 60 to 100 based on the teachings of Smith.

Lastly, the Appellants argue that even assuming, arguendo, that Smith did disclose a DOI of at least 80, Smith does not disclose the combination of a DOI of at least 80 and a gloss that exceeds 60% at a 20 degree angle. However, the Examiner again notes that Smith clearly teaches that the trim products have a gloss of at least about 60-65 at an angle of 20 degrees and hence, given the Examiner’s position that the DOI limitation is met, the claimed limitation combining the two properties is also met.

D. Smith does disclose Appellants claims 69-72

In this section, the Appellants again argue the DOI limitation to which the Examiner again maintains that a range of at least about 60 to 100 is taught by Smith.

Secondly, the Appellants argue that claims 69-72 depend upon base claims that were not rejected and hence claims 69-72 reciting additional limitations should not be rejected. However, the Examiner notes that the base claims were originally rejected over Smith but Appellants' 131 Declarations overcame the rejection of the base claims but failed to overcome claims 69-72 because the declarations failed to provide a showing of a reduction to practice of the claimed invention incorporating the DOI limitation.

With regards to Claims 67 and 68, the Examiner again notes 1) that Smith clearly teaches coextrusion, 2) that the Smith film is formed from the same ionomers as claimed and inherently have "matched" flow properties, particularly given that the term "matched" is only defined with regards to when the layers are coextruded, and 3) that the coextruded limitations are essentially product-by-process limitation wherein the term "coextruded" by itself does not provide any additional material or structural limitations to the claimed final product.

Rejection of claims 1, 3, 6, 43, 54-55, 57-60, 66-68, and 83-84 as obvious over JP'828

A. JP'828 does suggest appellant's surface layer

The Appellants first argue that the second outer layer disclosed in JP'828 is for sealing with another film and therefore "cannot be a surface or face layer" considering it would be "sticky" at the right temperature for sealing with another film and therefore would not have a distinctness of image given that it would be a "sticky" layer. The Appellants argue that the JP'828 reference taken as a whole is directed to a packaging film which does not require the characteristics of a decorative surface with DOI. The Examiner finds these arguments

completely unpersuasive given that the second outer layer taught by JP'828 is not "sticky" at room temperature, that DOI is not measured at the sealing temperature needed to seal the second outer layer taught by JP'828, and that the instant claims rejected over JP'828 are not directed to a decorative surface with DOI at all. The Appellants further argue that the outer "face" layer or first outer layer of JP'828 that does not come in contact with a product does not describe an ionomer layer as required by the instant claims, however, the Examiner notes that this layer is not the layer equated to the instantly claimed ionomer layer. As recited in the above description of JP'828, the second outer layer is the ionomer layer wherein JP'828 specifically teach an example, Structure 1, a 90 micron sodium ionomer outer layer c, a 235 micron sodium ionomer core layer b, and a 145 micron VLDPE/EVA blend outer layer a (*also reads upon substrate of Claim 43*) for a total film thickness of 470 microns or about 18.5 mils or about 12.8 mils for the two ionomer layers only (Table 1.) Hence, the only difference between the instant invention and the teachings of JP'828 is the incorporation of an additive from the list as claimed.

B. JP'828 does not teach away from a pigment or other additive

The Appellants argue that JP'828 does not suggest adding a pigment because the packaging film taught by JP'828 is meant to be clear however the Examiner notes that packaging materials can be both clear and colored and that many packaging materials in the art are both. Further, the Examiner notes that the additive is not limited solely to a pigment but may be selected from various other additives as listed in the claim, wherein the Examiner's position is that one skilled in the art at the time of the invention would have been motivated to incorporate conventional additives, including those as instantly claimed in the invention taught by JP'828, particularly a pigment, given the reasonable expectation of success.

C. JP'828 discloses a heat shrink film but is *capable* of being thermoformed

1. The sub-heading of this section refers to distinctness of image (DOI), however the section does not argue the DOI limitation but actually argues the thermoformable limitation. The Appellants argue that the instant claims are directed to a thermoformable film or sheet (*an intended use limitation*) and that JP'828 does not suggest a thermoformable film or sheet. However, the Examiner notes that a limitation that is merely a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The Examiner maintains her position that the film taught by JP'828 is *capable* of being thermoformed, particularly the intermediate structure, i.e. before stretching, which as taught by JP'828 has a total film thickness of about 400 to about 820 microns which reads upon the claimed thickness ranges, and comprises the same layer materials as the instant invention. The Examiner maintains that a film having the disclosed film thickness taught by JP'828 and formed from the thermoplastic polymers taught by JP'828 would be *capable* of being thermoformed.

2. Thermoformable film and heat shrink film are made by different process

The Examiner notes that this section refers to post processing of the film laminates and that the instant claims do not recite a thermoformed film only that the film is thermoformable, hence capable of being thermoformed. Hence, the Examiner maintains that the multilayer film taught by JP'828, specifically the intermediate film or Structure No. 1 in the disclosed example, is capable of being thermoformed and hence reads upon the claimed limitation.

3. Thermoformable film and heat shrink film have different thickness

The Appellants argue that the instant claims recite a thickness of about 8 to about 60 mils and that heat shrinkable film have a much thinner thickness. However, the Examiner notes that JP'828 specifically teach that before stretching, the film has a total thickness of about 400 to about 820 microns and provides a specific example Structure No. 1, which includes a 90 micron sodium ionomer outer layer c, a 235 micron sodium ionomer core layer b, and a 145 micron VLDPE/EVA blend outer layer a (*also reads upon substrate of Claim 43*) for a total film thickness of 470 microns or about 18.5 mils or about 12.8 mils for the two ionomer layers only (Table 1), Hence falling within the claimed range of about 8 to about 60 mils, which would in turn be "thermoformable".

4. End-use process difference and 5. Whether a heat shrinkable film is thermoformable

Again, the Appellants argue an intended use limitation that does not appear to result in a structural difference between the claimed invention and the prior art given that the film taught by JP'828 is capable of being thermoformed whether in the intermediate or heat shrinkable stage.

4. (Second item 4) With regards to Claim 6, the Examiner maintains that a pigment or dye or other coloring agent would have been obvious in any of the layers.

5. (Second item 5) With regards to Claim 43, the Examiner has already equated the third layer taught by JP'828 to the claimed "substrate" given that the term substrate does not provide any material or structural difference over the outer layer taught by JP'828 to which the two layers are adhered.

6. In this item, the Appellants provide a general allegation that claims 66-68 define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from JP'828, particularly since JP'828 clearly teach a coextruded film.

7. In this section the Appellants argue additional features of Claims 69-72 which further distinguish the invention over JP'828, however the Examiner notes that Claims 69-72 were not rejected over JP'828.

8. In this section, the Appellants refer to Claim 82, however, Claim 82 was not rejected over JP'828 and hence the Examiner believes the Appellants meant to refer to Claim 83 in this section and 84 in Section 9. In terms of Claim 83, the third layer taught by JP'828 has been equated to the claimed "substrate" and considering the third layer is a polymer layer, reads upon the claimed invention.

9. It is believed that this section was meant to refer to Claim 84 however the Appellants have failed to specifically pointing out how the language of the claim patentably distinguishes it from JP'828, particularly given the arguments in section 8 above and the absence of any additives in the film taught by JP'828 would result in a clear film.

Rejection of claims 1, 3, 6, 43, 54-55, 57-60, 66-68 and 83-84 over Flieger

As discussed above, the only difference between the instant invention and the invention taught by Flieger is the claimed thickness of **about 8 mils to** about 60 mils. The Appellants argue that Flieger does not suggest a thickness larger than 125 microns (about 5 mils) and hence does suggest the claimed invention given that Flieger only disclose a 25 kg bag having a thickness of 70-125 microns. The Examiner does not find the Appellants' arguments persuasive and first notes that the upper limit of the 25 kg bag taught by Flieger is about 5 mils which is close enough to read upon the claimed about 8 mils or suggest that a thickness slightly larger than the preferred endpoint for the specific embodiment. The Examiner notes that that Flieger et

al specifically teach that the packaging film can be used to make a bag **or other container**, and hence does not limit the invention to a 25kg bag only and in fact suggests that the packaging can vary in thickness based on the intended end use as discussed above. With respect to Appellants arguments regarding the compounding of a larger bag, the Examiner notes that the teachings of Flieger et al with respect to non-negligible effects on the compounding of the bag do not teach away from the claimed thickness as argued by the Appellants. As stated previously, the bag is only one embodiment of Flieger et al and the Examiner maintains her position that the thickness is an obvious result-effective variable and one skilled in the art would have been motivated to utilize routine experimentation to determine the optimum thickness based on the desired mechanical properties and end use.

Next, the Appellants argue that Flieger cannot be a reference given that the patent became enforceable on August 4, 1998 and that the Appellants have submitted a Rule 131 declaration that antedates the critical date of the Flieger patent. However, the Examiner notes that the Flieger reference is a 102(b) reference, not a 102(a) reference as argued by the Appellants, and cannot be sworn behind.

The Appellants also argue that the inner layer of Flieger is pigmented and not clear; however, Flieger teaches that the outer layer is clear and the disclosed structure would still read upon the claimed invention of Claim 6.

In terms of the substrate of Claims 43 and 83-84, as stated previously, a third polymer layer would read upon the claimed substrate and given that Flieger teaches a third polymer layer and reference meets these limitations.

In terms of the thickness of Claims 57-60, the Examiner maintains that the one having ordinary skill in the art would have been motivated to utilize routine experimentation to determine optimum thickness based on the desired mechanical properties and end use wherein the claimed thicknesses are of the same order of magnitude of the thickness range taught by Flieger.

In terms of the DOI of Claims 69-72, it is noted that these claims were not part of the rejection.

As for Claim 82, the claim is canceled and no longer pending in the application.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Monique R Jackson/

Primary Examiner, Art Unit 1794

March 26, 2008

Conferees:

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